

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-124003

(43)Date of publication of application : 15.05.1998

(51)Int.Cl.

G09G 3/28

G09G 3/20

H04N 5/66

(21)Application number : 08-275741

(71)Applicant : FUJITSU GENERAL LTD

(22)Date of filing : 18.10.1996

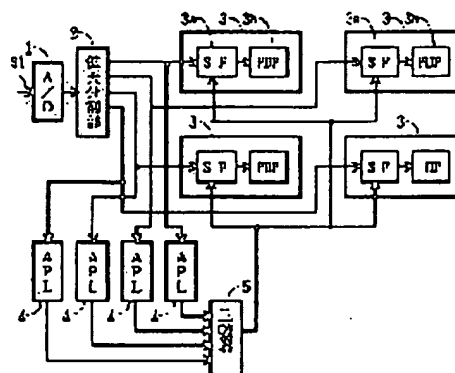
(72)Inventor : HAGA MINORU

(54) MULTI-SCREEN PLASMA DISPLAY DEVICE

(57)Abstract

PROBLEM TO BE SOLVED: To display a picture with the maximum brightness and to perform display in which brightness between each screen is even in multi-screen display.

SOLUTION: Plural display units 3 using PDP 3b (plasma display panel) are arranged longitudinally and laterally, one input video signal S1 is converted into a digital signal by an A/D converter 1, enlarged and divided by an enlarging/dividing section 2 and displayed, and a multi-screen plasma display device is constituted. Video signals for each display unit enlarged and divided by the enlarging/dividing section 2 are branched and inputted to APL(average picture level) calculating section 4, 4,..., and APL for each video signal is obtained. APL for each video signal are compared by a comparator 5, APL having the maximum value is inputted to a power consumption control section 3 of a display unit 3 and power consumption is controlled. In the power consumption control section 3a, power consumption of the display unit 3 is controlled based on the maximum value of APL as the control signal so that power consumption of the display unit 3 does not exceed the maximum power consumption of PDP.



LEGAL STATUS

[Date of request for examination]

26.03.2002

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the multi-screen plasma display equipment out of which the nonuniformity of the brightness between each screen does not come while pulling out the display brightness of PDP to the maximum extent.

[0002]

[Description of the Prior Art] When displaying television imagery etc. on PDP, the maximum luminescence brightness may not be able to say that it is enough. That is, if it is set as the power consumption to which video-signal level is restricted from the maximum electric power consumption of PDP corresponding to a bright high screen, sufficient brightness cannot be taken on middle brightness or a middle dark screen. Then, it is common that prepare the automatic power consumption control function which controls the power consumption of PDP according to the level of the video signal of an input, and the bright display screen is obtained within maximum electric power consumption. However, since brightness differs for every unit and the controlled variables of power consumption also differ when a multi-screen is constituted from a display unit which prepared this automatic power consumption control function, there is a problem which the nonuniformity of brightness arises between display units and spoils display image quality.

[0003]

[Problem(s) to be Solved by the Invention] While this invention was made in view of the above-mentioned trouble and displaying it with the brightness greatest by multi-picture features, it aims at offering the technique of performing the display without the nonuniformity of the brightness between each screen.

[0004]

[Means for Solving the Problem] The nonuniformity of the brightness of each screen is lost using [the power consumption control section which controls the power consumption of said display unit by making APL of an input video signal etc. into a control signal is prepared, control so that neither of the display units exceeds the maximum electric power consumption of PDP with said one control signal, and] the controlled variable of power consumption as the same between each display unit.

[0005]

[Embodiment of the Invention] Two or more display units using PDP are arranged in in all directions, and the power consumption control section which controls the power consumption of said display unit by making APL of an input video signal etc. into a control signal in the multi-screen plasma display equipment which carries out expansion division and displays input video signals, such as one television imagery, is prepared, and it controls so that neither of the display units exceeds the maximum electric power consumption of PDP with said one control signal.

[0006] The control signal of said power consumption control section is set to APL calculated from the video signal of each display unit reliance after carrying out expansion division of said input video signal.

[0007] The comparator of said APL is prepared and APL with the greatest value of APL calculated from the video signal of each display unit reliance is made into said control signal.

[0008] Said power consumption control section is performed by controlling the frequency of the luminescence pulse which drives PDP.

[0009] Said power consumption control section controls the period of the subfield which divided the 1 field of the video signal for displaying halftone on PDP at a rate of display brightness.

[0010]

[Example] Drawing 1 is the outline block diagram of the multi-screen plasma display equipment by this invention. Two or more the display units 3 and 3 and .. using PDP3b are arranged in in all directions, and the input video signals S1, such as one television imagery, are digitized with A/D converter 1, and expansion division is carried out in the expansion division section 2, it displays as a video signal of each display unit reliance, and multi-screen plasma display equipment is constituted. In the expansion division section 2, it branches to the APL calculation sections 4 and 4 and .., the video signal of each display unit reliance which carried out expansion division is inputted, and APL for every video signal is calculated. A comparator 5 compares APL for every video signal of that, and APL with the greatest value is inputted into power consumption control-section 3a of the display unit 3, and is controlled. The power consumption of the display unit 3 is controlled by power consumption control-section 3a based on the value of the greatest APL as the above-mentioned control signal, and it controls by it so that the power consumption of the display unit 3 does not exceed the maximum electric power consumption of PDP.

[0011] In power consumption control-section 3a, the greatest above-mentioned APL is inputted, the frequency of the luminescence pulse which drives PDP beforehand defined to the value of each APL is read from a look-up table, and it sets up as a frequency of the luminescence pulse which drives PDP. Or power consumption control-section 3a inputs the greatest above-mentioned APL, reads each period of the subfield which divided the 1 field of the video signal for displaying halftone on PDP which drives PDP beforehand appointed to the value of each APL at a rate of display brightness from a look-up table, and sets it up as a period of the subfield which drives PDP.

[0012]

[Effect of the Invention] This invention is carried out with a gestalt which was explained above, and does so effectiveness which is indicated below.

[0013] Since the controlled variable which controls the power consumption between each display unit by preparing the power consumption control section which controls the power consumption of said display unit by making APL of an input video signal etc. into a control signal, and controlling so that neither of the display units exceeds the maximum electric power consumption of PDP with said one control signal becomes the same, the nonuniformity of the brightness of each screen of a multi-screen is lost. Therefore, the good multi-picture features of display image quality are obtained.

[Translation done.]